

Where are the growth potentials in CESEE?


An illustration of sectors and products using the product space

(Joint work with Doris Hanzl-Weiss and Robert Stehrer)

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Motivation and objective of the paper

- FDI-oriented model as a catalyst for structural change
(Grieveson et al. 2021; Bykova et al. 2023; Zavorskà et al. 2023)
- This growth model reached its limits
- Search for new model based on new growth potentials



➤ **Objective:** Framework and exploratory analysis to identify new growth potentials through multiple and highly disaggregated data

Structure of the paper



Setting the scene

Analysis of industry structures (value added, VA) & RCAs
(*FIGARO database*)



In which industries do these countries specialise? Which industries grew the most between 2013 and 2020?



Identifying promising products

Analysis of the product space
Highly disaggregated export data (4-digit)
(*UN Comtrade + Atlas of Economic Complexity*)



Which product categories are technically feasible *and* allow for upgrading?

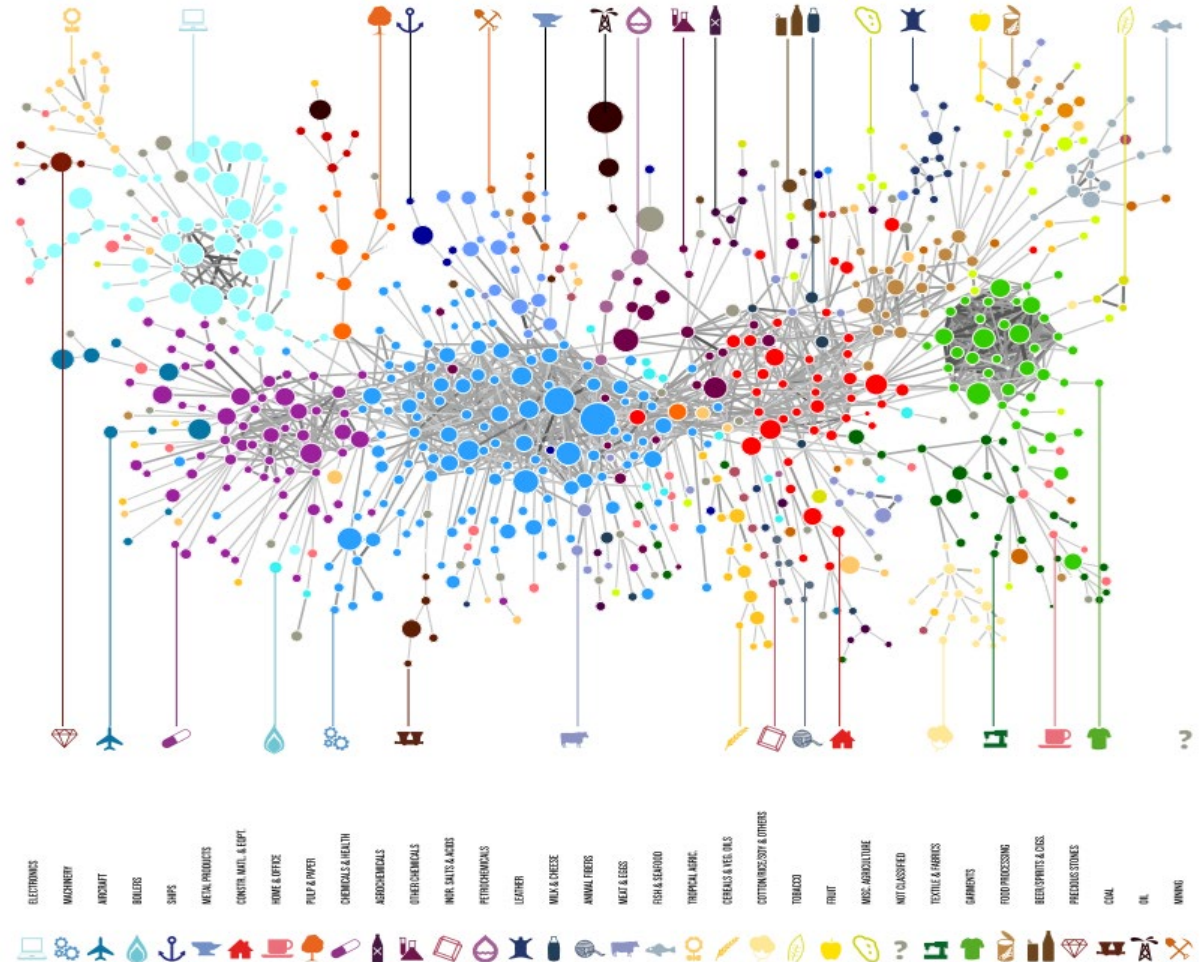
Setting the scene

- While manufacturing VA and RCAs declined, the region holds its comparative advantage
 - Deepened specialisation in **motor vehicles & electrical equipment**

- Services gained in importance, both in terms of value added and RCAs
 - Particularly **computer programming, consultancy and information services**

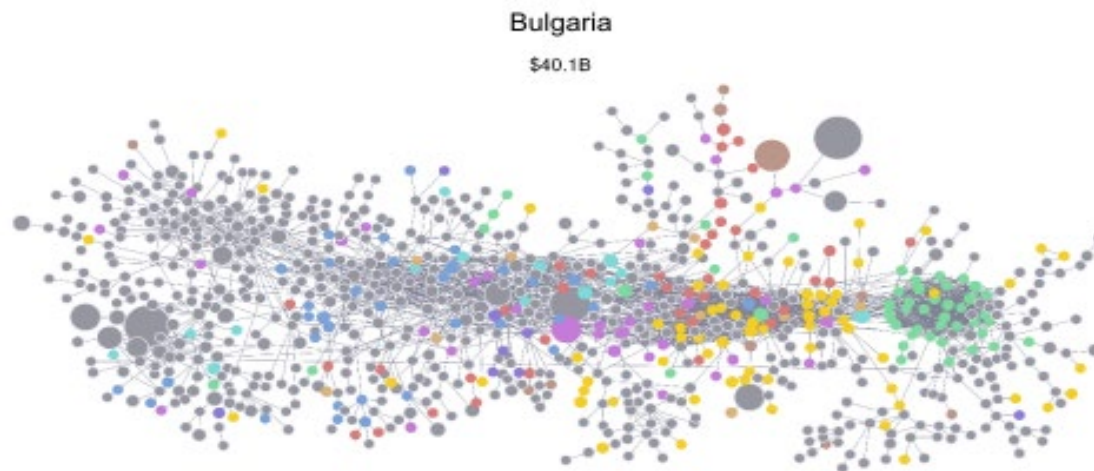
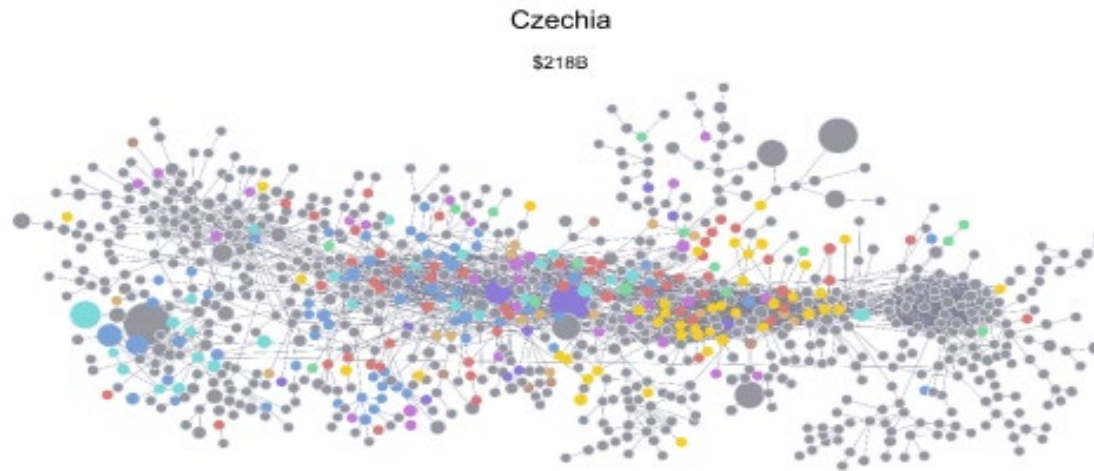
A product space

- Product space contains all products exported in the world (no services)
- Each dot is a product
- Products are linked when they are similar
- More complex products are in the core of the product space
- The colours of the dot indicate broadly defined sectors
- The size of the dot indicates world exports



Source: Hausmann et al. (2013).

The product spaces of Czechia and Bulgaria



- Coloured dots are products exported competitively
- Grey dots are products not exported or exported with low competitiveness
- The size of the dot indicates world exports

➤ Key takeaways:

- Different specialisations (e.g. textiles in Bulgaria, vehicles in Czechia)
- Different complexity levels (more coloured dots in the core for Czechia)

Identifying promising products

Identify products that are in line with specialisations *and* allow for upgrading

Focus on products for which competitiveness is currently low



Select manufacturing products that allow countries to upgrade



Lists of growth potentials for each country
&
common targets

Example: The top 20 growth potentials for Slovakia

Name	Code	World trade	RCA	Distance	PCI	Sector
Machinery for making paper	8439	5.1	0.42	0.77	1.59	Machinery
Molding boxes for metal foundry	8480	16.9	0.40	0.77	1.53	
Machine tools for drilling by removing metal	8459	2.6	0.24	0.77	1.47	
Appliances for thermostatically controlled valves	8481	85.6	0.32	0.78	1.58	
Tools for hand working, pneumatic, hydraulic motors	8467	8.6	0.37	0.79	1.59	
Calendering or other rolling machines, other than for metals or glass	8420	1.2	0.71	0.79	1.63	
Auxiliary machinery for use with knitting and textile machines	8448	3.9	0.59	0.80	1.47	
Other machine tools for planing and cutting metals	8461	2.0	0.34	0.80	1.99	
Fork-lift trucks	8427	16.1	0.18	0.80	1.73	
Instruments for physical or chemical analysis	9027	47.9	0.13	0.81	1.98	
Machining centers for working metal	8457	7.4	0.22	0.81	2.09	
Microscopes, other than optical	9012	3.0	0.17	0.82	2.09	
Machines n.e.c.	8479	124.0	0.71	0.82	2.11	
Serums and vaccines	3002	222.0	0.04	0.79	1.56	
Pickling preparations for metal surfaces	3810	1.6	0.09	0.79	1.79	
Prepared culture media for micro-organisms	3821	3.2	0.14	0.81	1.64	
Acrylic polymers	3906	15.2	0.08	0.81	1.47	
Polyamides	3908	11.9	0.54	0.80	1.69	
Ion-exchangers based on polymers	3914	1.9	0.02	0.81	1.83	
Self-propelled railway coaches	8603	4.8	0.43	0.81	1.59	Vehicles

Source: Guadagno et al. (2024).

Note: PCI refers to the Product Complexity Index.

Several common targets

Sector	Name	HU	SK	SI	PL	RO	EE	LT	LV	BG	HR
Chemicals	Phenols, phenol-alcohols	X		X			X		X	X	X
Chemicals	Pickling preparations for metal surfaces		X	X			X	X	X	X	X
Chemicals	Prepared culture media for micro-organisms	X	X	X	X		X	X	X		X
Chemicals	Polyamides	X	X				X	X	X	X	X
Chemicals	Ion-exchangers based on polymers	X	X	X				X	X		X
Textiles	Rubberized textile fabrics						X	X	X	X	X
Machinery	Calendering or other rolling machines, other than for metals or glass	X	X		X	X			X	X	
Machinery	Fork-lift trucks	X	X	X	X		X	X	X		X
Machinery	Machines for working materials by laser and similar means	X		X			X			X	X
Machinery	Machining centers for working metal	X	X	X			X				X
Machinery	Other machine tools for planing and cutting metals	X	X	X	X	X	X	X		X	X
Machinery	Tools for hand working, pneumatic, hydraulic motors	X	X		X	X			X		
Machinery	Machines for assembling electric lamps	X		X	X		X	X	X	X	
Machinery	Machinery for working rubber or plastics	X			X	X	X	X	X	X	
Machinery	Machines n.e.c.	X	X	X			X	X	X		X
Electronics	Electric soldering machines	X			X	X	X	X	X	X	X
Vehicles	Parts of motor vehicles						X	X	X	X	X
Machinery	Microscopes, other than optical	X	X	X			X	X			X
Machinery	Instruments for physical or chemical analysis	X	X	X	X			X	X	X	X

Source: Guadagno et al. (2024).

Three takeaways

1. Manufacturing still relevant for competitiveness
2. New role of modern services (particularly computer programming, consultancy and information services)
3. There are products that are in line with the current specialisations *and* allow for upgrading. In some cases, more realistic and ambitious goals (safe and strategic bets) must be combined.

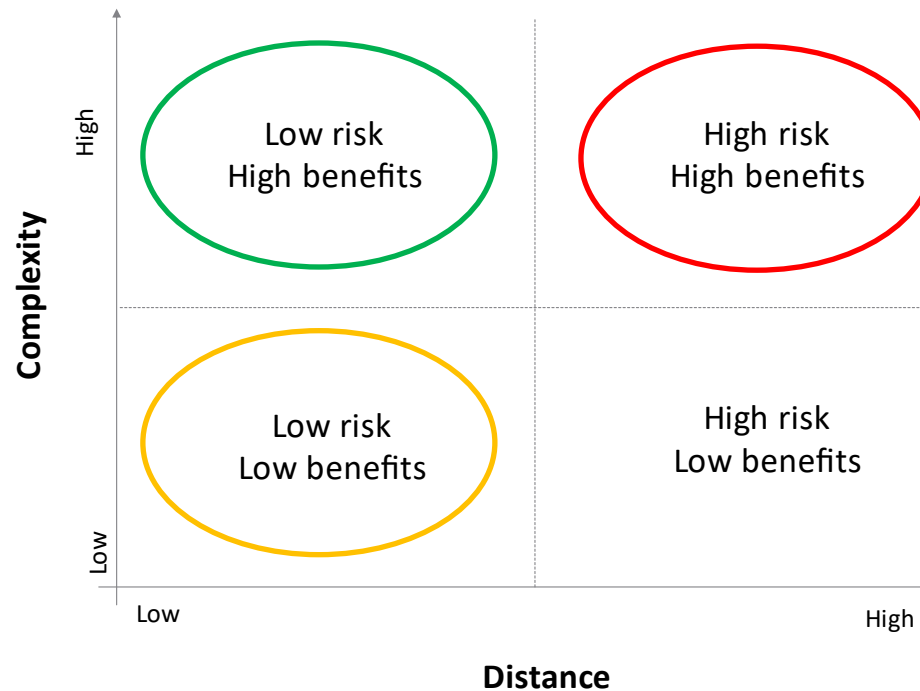
Policy relevance

- Our results should *not* be interpreted as a ready-made list of industries and products to be targeted by future industrial policies
- Data and (even sophisticated) indicators can inform policymaking
- A battery of indicators, perspectives and ‘reality checks’ are necessary to find market niches that can be targeted by industrial and STI policies

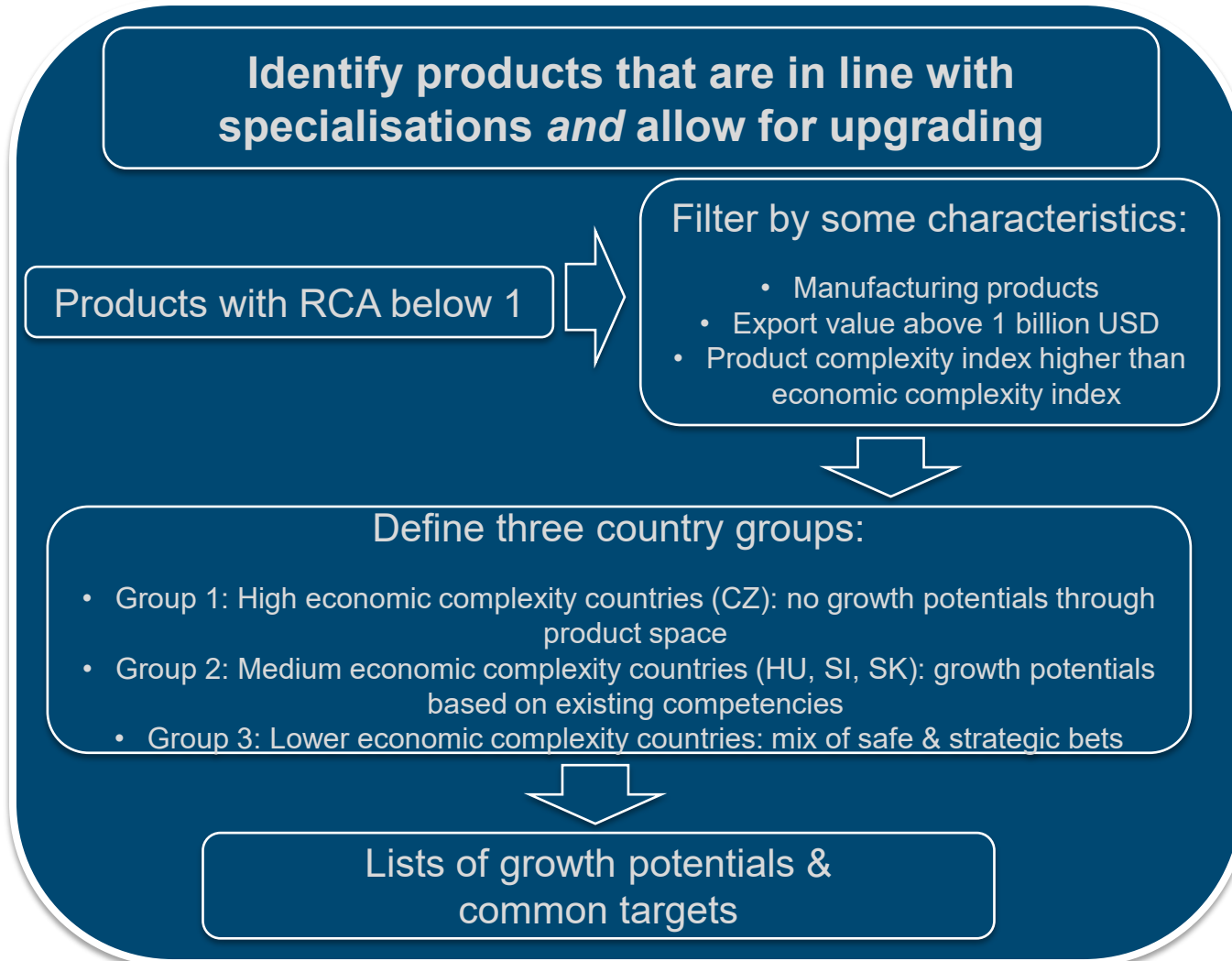
Back-up

Developing a diversification strategy based on the product space methodology

What a country can aspire to crucially depends on what it already produces



The methodology in detail



Lithuania: The top 20 safe bets

Name	Code	World trade	RCA	Distance	PCI	Sector
Wadding, gauze and bandages	3005	8.2	0.42	0.67	1.05	Chemicals
Pharmaceutical goods	3006	13.8	0.89	0.69	0.81	Chemicals
Refractory cements	3816	2.2	0.80	0.69	0.86	Chemicals
Compounded rubber	4005	5.0	0.16	0.69	1.14	Chemicals
Vulcanised rubber tubes	4009	9.1	0.41	0.68	1.04	Chemicals
Other articles of vulcanised rubber	4016	25.3	0.60	0.67	0.86	Chemicals
Electric motors and generators	8501	53.1	0.33	0.69	0.84	Electronics
Electric signal and traffic controls	8530	2.4	0.66	0.66	1.01	Electronics
Parts for electrical apparatus	8538	32.3	0.82	0.69	1.03	Electronics
Electrical insulators of any material	8546	2.4	0.57	0.68	0.85	Electronics
Other engines and motors	8412	22.0	0.48	0.70	0.88	Machinery
Centrifuges	8421	74.4	0.87	0.68	1.00	Machinery
Machinery for making paper	8439	5.1	0.62	0.70	1.59	Machinery
Automatic regulating instruments	9032	31.1	0.35	0.69	1.20	Machinery
Non-woven textiles	5603	18.0	0.40	0.69	0.92	Textiles
Rubberised textile fabrics	5906	1.4	0.47	0.68	1.12	Textiles
Textile articles for technical use	5911	5.0	0.82	0.69	1.22	Textiles
Medical, dental or veterinary furniture	9402	4.7	0.75	0.68	1.00	Textiles
Vehicle Bodies	8707	7.3	0.50	0.69	1.11	Vehicles
Parts of motor vehicles	8708	332.0	0.35	0.69	1.18	Vehicles

Lithuania: the strategic bets

Name	Code	World Trade	RCA	Distance	PCI	Sector
Forklift trucks	8427	16.1	0.47	0.73	1.73	Machinery
Other machine tools for planing and cutting metals	8461	2.0	0.48	0.75	1.99	Machinery
Machines for assembling electric lamps	8475	4.6	0.32	0.74	1.64	Machinery
Machinery for working rubber or plastics	8477	24.5	0.49	0.74	1.89	Machinery
Machines n.e.c.	8479	124.0	0.49	0.75	2.11	Machinery
Microscopes, other than optical	9012	3.0	0.49	0.76	2.09	Machinery
Instruments for physical or chemical analysis	9027	47.9	0.82	0.72	1.98	Machinery
Compounds of precious metals	2843	10.0	0.02	0.76	1.82	Chemicals
Pickling preparations for metal surfaces	3810	1.6	0.33	0.72	1.79	Chemicals
Prepared culture media for micro-organisms	3821	3.2	0.98	0.73	1.64	Chemicals
Polyamides	3908	11.9	0.33	0.72	1.69	Chemicals
Ion-exchangers based on polymers	3914	1.9	0.45	0.75	1.83	Chemicals
Electric soldering machines	8515	10.7	0.70	0.75	2.14	Electronics